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Washington, DC 20554

DEC 3 0 1996.

In re

FEDERAL COMMUNICATIONS COMMISSION OFFICE OF SECRETARY

Amendment of Section 73.202(b) Table of Assignments FM Broadcast Stations Brownsville and Beaver Dam Kentucky

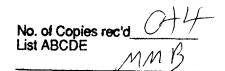
To: Chief, Allocations Branch

## PETITION FOR RECONSIDERATION

Charles M. Anderson, by his attorney, hereby petitions for reconsideration of the letter ruling dated November 28, 1996, which dismissed his petition for rule making. In support thereof, the following is shown.

Anderson sought rule making to amend Section 73.202(b) of the Commission's rules to substitute Channel 264C3 at Brownsville, Kentucky, for Channel 264A at Beaver Dam, Kentucky. Anderson presently holds an unbuilt construction permit for Channel 264A at Beaver Dam (File No. BPH-941122MM) (the "station") and upon conclusion of the requested rule making, his construction permit would be modified to specify Brownsville as the station's community of license. Grant of Anderson's proposal will, inter alia, provide a first local transmission service to both Brownsville and Edmonson County, and will provide a new radio service to 133,380 people, 104,232 more than the 29,1481 who would receive a new service from

<sup>1</sup> The population figure is derived assuming uniform terrain around the transmitter site. It thus differs from the population figure reported in the application for construction permit, which used the 60 dBu contour determined according to the instructions to Form 301.



the Class A facility at Beaver Dam.

In dismissing Anderson's petition and concluding that Anderson's proposal would not serve the goals of Section 307(b) of the Communications Act of 1934, as amended, the Commission's staff mechanically relied on only one factor—Beaver Dam's population edge over Brownsville of approximately 2,100 persons.<sup>2</sup> Such approach is improper and led the staff to an incorrect conclusion.

The Commission has identified four criteria it would consider in determining whether the objectives of Section 307(b) of the Communications Act would be met by adoption of a change in the FM Table of Allotments. Revision of FM Assignment Policies and Procedures ("FM Priorities"), 90 FCC 2d 88 (1982). In the instant case, only the fourth consideration, other public interest matters, is relevant.<sup>3</sup>

Note 8 to <u>FM Priorities</u> recites a number of matters which are considered within this fourth consideration:

This comparison can take into account the number of aural services received in the proposed service area, the number of local services, the need for or lack of public radio service and other matters such as the relative size of the proposed communities and their growth rate.

Thus, the relative size of the communities is only one of many factors to be considered. It is included merely as an example of "other matters", the last area indicated. Hence, its importance

<sup>&</sup>lt;sup>2</sup> Revised figures, provided in the attached Technical Report, show a population difference of 1,976. The Commission may take official notice of Census Bureau statistics.

<sup>&</sup>lt;sup>3</sup> The first three criteria do not apply here, for neither a Beaver Dam nor a Brownsville facility would serve "white" or "grey" area, and either facility would be the first local transmission service to its respective community.

vis a vis the other concerns expressed is reduced, and should not be elevated to primary importance, as the staff did in rejecting Anderson's proposal. The Commission must address all the items listed in note 8, along with other relevant considerations.<sup>4</sup>

The requirement that the Commission look at all the characteristics of each community was expanded upon in <a href="Mark L. Wodlinger">Mark L. Wodlinger</a>, 101 FCC 2d 762, (Rev. Bd. 1985), where the Review Board stated:

Ordinarily, in choosing between two communities under Section 307(b), where both have the same existing level of broadcast services, the community with the larger population is presumed to have the greater need for the service. This presumption can, however, be overcome by a showing that the communities possess various other attributes which demonstrate the smaller community has a greater need. (Emphasis supplied.) See, e.g., Affinity Communications Corp., 96 FCC 2d 685, 86-87 (Rev. Bd. 1984); Cornwall Broadcasting Corp., 89 FCC 2d 704, 709-10 (Rev. Bd. 1982).

The Board's statement flows directly from the holding in <u>Star of</u> the <u>Plains Broadcasting v. FCC</u>, 267 F.2d 629 (DC Cir. 1959). There the Court stated,

... the key issue for purposes of the Section 307(b) proceeding was the comparative needs of the two communities. Under such circumstances, the Commission could hardly find that one community's need was greater or less than the other's without substantial evidence as to those needs.

In the instant case, the staff failed to consider the evidence Anderson presented to demonstrate that Brownsville was in greater

<sup>&</sup>lt;sup>4</sup> Anderson is aware of the Commission's decision in <u>Blanchard</u>, <u>Louisiana and Stephens</u>, <u>Arkansas</u>, 10 FCC Rcd 9828 (1995), in which the Commission, after quoting the complete note 8 criteria, stated that it looks solely to population difference and a comparison of reception services. The Commission did not explain its basis for omiting consideration of the other note 8 criteria which evolved during a notice and comment rule making proceeding.

need of its first local service than Beaver Dam. Anderson supplied letters from community leaders attesting to Brownsville's need for a local transmission service. Both Brownsville and Edmonson County are bereft of local broadcast service, which is not the case with Beaver Dam, whose county (Ohio) has local service.

Moreover, the Commission recognizes that Brownsville receives service from only one station, WGGC (FM) Glasgow, Kentucky, which is about 36 km away. WHAS and WSM, both 50 kW clear channel AM stations, also include Brownsville within their primary service contour. However, as they are about 100 miles distant (98.6 miles and 97.2 miles respectively), they are not considered to provide service. Birch Bay Broadcasting Co., Inc., 33 FCC 445 (Rev. Bd. 1963).5

Beaver Dam's needs are currently well-served. As shown by the attached Technical Report of Charles Anderson, five existing stations provide service to Beaver Dam: WSNR/WKHB(FM), Hartford, Kentucky, WQXQ(FM), Central City, Kentucky, and WBKR(FM) and WSTO(FM), Owensboro, Kentucky. WLLS and WLLS-FM devote significant programming to news and events in Beaver Dam, including carriage of Ohio County school system sports, school closings, school menus,

<sup>&</sup>lt;sup>5</sup> The theoretical 60 dBu contours of three other stations, WBLG, Smiths Grove, WDNS, Bowling Green, and WHHT, Cave City, all Kentucky, encompass Brownsville. However, none of these stations are line-of-sight to Brownsville, and propagation studies demonstrate that their signal over Brownsville is significantly below the requisite 60 dBu. See Anderson's attached Technical Report.

weather and emergency information.<sup>6</sup> The boundaries of Beaver Dam are less than a mile from those of Hartford; they are essentially twin cities. Even though the Commission has abolished the reciprocal-service doctrine, it cannot fail to consider the service given to Beaver Dam by existing stations in comparing its need for a transmission outlet with that of Brownsville.<sup>7</sup>

As noted above, there are no radio stations licensed to, or allotments for, any community in Edmonson County. The letters Anderson submitted as a supplement to his petition on October 4, 1996, clearly show that there are important, but unmet, needs of Brownsville and Edmonson County. Adoption of Anderson's proposal is the only way to bring local service to this area. For example, according to the Director of the Brownsville/Edmonson County Chamber of Commerce, the needs of neither Brownsville nor Edmonson County are served by any radio station.

The communities' respective rates of growth is another factor identified by the Commission in comparing two communities. Anderson's Report provides the 1980 and 1990 Census figures for both Brownsville and Beaver Dam. As is seen, Brownsville is a growing community, whose population increased by 46% over the

<sup>&</sup>lt;sup>6</sup> The <u>Star of the Plains</u> Court held that programming considerations were paramount in determining whether a communities needs were being met.

<sup>&</sup>lt;sup>7</sup> It is also noteworthy that the allotment for Beaver Dam lay fallow for many years until Anderson submitted his "first comefirst served" application in 1994. Other than Anderson, no one has demonstrated any interest in operating a Beaver Dam station. Anderson now indicates a greater interest in operating a Brownsville station which will concomitantly serve many more people, particularly those in unserved Edmonson County.

decade. Beaver Dam, in contrast, is shrinking. It lost 10% of its population during the 1980's.

In the past, the Commission has departed from strict application of its priorities in comparing the needs of one community with another for a new service. In North Charleston, SC, 51 RR 2d 25 (BB 1982), the Bureau noted that the FM assignment priorities were not meant to be applied in a rigid or mechanical fashion. a community was awarded a second local service in lieu of the first service to another community after consideration of the respective needs of the two communities for the new service. See also Beacon Broadcasting, 63 RR 2d 794 (1987). It is clear that the Commission does not always blindly or mechanically follow its allotment priorities when to do so would produce anomalous results and disserve the public. Even though first local service is a high priority, a level above that of second service to a community, it does not always disqualify a more deserving community which nevertheless has an existing transmission service. Here, the two communities of Brownsville and Beaver Dam are both the same priority. Thus, there is even a lesser distinction between them than obtained in the cases cited in this paragraph.

The overall public interest considerations here weigh strongly in favor of Anderson's proposal. Not only will the Brownsville station serve a more needy community, it will also serve a much larger area and population. Grant of Anderson's proposal would provide a new broadcast service to 104,232 additional people as compared to a Beaver Dam facility. Clearly, adopting Anderson's

proposal would result in a more efficient use of the spectrum.

In sum, it was error for the Commission to rely solely on the population difference between the two communities in assessing the acceptability of Anderson's petition. Review of all the factors which the Commission stated it considers, (need of the community for local service, reception services in the community and the service area, growth rates of the community, and other factors) demonstrates the merit of Anderson's proposal. Brownsville's need for its first station is at least as great as that of Beaver Dam. The needs of Edmonson County residents for the Brownsville station is much greater than the needs of Ohio County listeners for a Beaver Dam station. The provision of a new service to over 100,000 additional persons, even if most have five or more existing services, is clearly a more efficient use of the spectrum.

In view of the above, the Commission should reconsider its action of November 28, 1996, and substitute Channel 264C3 at Brownsville for Channel 264A at Beaver Dam.

Respectfully Submitted,

CHARLES M. ANDERSON

Jerrold Miller His Attorney

December 30, 1996

Miller & Miller, P.C. P.O. Box 33003 Washington, DC 20033

### TECHNICAL REPORT

This technical report has been developed in support of a petition for reconsideration of the Mass Media's Bureau's dismissal of a petition for rulemaking requesting the upgrade of an existing construction permit on 264A (100.7 MHZ) at Beaver Dam, KY (BPH-941122MM) to 264C3, and its reallocation to Brownsville, KY, county seat of Edmonson County, as that community's and county's first local aural service.

## L. Advantages of the upgrade and reallocation:

The advantages of the requested action are restated and amplified herein with some additional information. Granting the requested upgrade will:

- 1. Provide Brownsville and Edmonson county with their <u>first local aural service</u>. The nearest stations to Brownsville are licensed to Bowling Green, KY some 26 km distant in another county;
- 2. Provide an additional FM broadcast service to 133,380 persons or a gain of 104,232 (+361%) over the existing class A construction permit;
- 3. Provide a 94% gain in coverage area (+2,315 square kilometers = 4,778-2,463);
- 4. Fulfill the Commission's objective of making the most efficient use of the spectrum and assigning the highest class of allocation possible when requested.

In the interest of providing effective and efficient management of the frequency spectrum, the Commission will allot the highest class channel requested to a community that meets the technical provisions of our rules (see Ludlow, California Report and Order in MM Docket No. 92-148 at para. 10).

Commission policy favors enhanced service from existing licensees (Report and Order in Amendment of the Commission's Rules Regarding the Modification of FM and Television Station Licenses, MM Docket No. 83-1148, at paragraph 9);

Here, a change in city of license is required in order to make the most efficient use of channel 264 because 264C3 may not be assigned to Beaver Dam in accordance with the

requirements requirement that a 70 dBu contour be placed entirely over the city of allocation. Therefore, the reallocation to Brownsville is required in order to fulfill the Commission's policy of efficient use of the radio frequency spectrum. And,

5. Assign the allocation to a community demonstrating significant growth in population, and need for the service as strongly expressed by the city's community leaders.

# II. Population comparisons:

Brownsville has demonstrated a 121% growth in population since 1950. Its recent growth of 46% (1980 to 1990 - U.S. Census) is particularly dramatic. It is noteworthy that during the same period, Beaver Dam's population declined by 10%.

City	1980 Census	1990 Census	Change
Brownsville	674	897	+313 (+46%)
Beaver Dam	3,185	2,873	- 312 (-10%)

The Commission has repeatedly identified population growth as an important factor in making allocation decisions (1).

# Reception services to the two communities:

An analysis of the aural services presently received by the two communities revealed:

# Brownsville (1)) 1. WGGC - 236C, Glasgow 1. WBKR - 223C, Owensboro 2. WSTO - 241C, Owensboro 3. WQXQ - 270C1, Central City 4. WKHB - 292A, Hartford 5. WSNR - 1600 kHz-D, Hartford

Three FM stations (WBLG, Smiths Grove, WDNS, Bowling Green, and WHHT, Cave

City) whose theoretical 60 dBu contours encompass Brownsville were excluded as reception services based on propagation studies performed by Dataworld utilizing the Longley-Rice methodology (see Exhibit E for relevant portions of those studies). These studies have been performed because of the unique terrain surrounding Brownsville. Brownsville itself is at 537 feet AMSL (benchmark within city limits). It is immediately surrounded by 700 ft + hills which constitute a knife edge diffraction with respect to any received FM signals in the city. Such alternate prediction methods have been utilized in rulemaking proceedings to established predicted field strength where knife edge obstructions existed. Furthermore, the Longley-Rice model has been regularly accepted as a valid means of predicting FM field strength. This extremely rugged terrain surrounding Brownsville is to be expected in a city which is situated immediately adjacent to Mammoth Cave National Park. The studies utilized the stations' licensed facilities (in all cases maximum for their class and at a height above average terrain significantly greater than the class maximum with reduced ERP) and assumed a receiver height above ground level of 9 meters in accordance with Commission methodology.

<sup>(1)</sup> All population figures were obtained directly or indirectly from the applicable U.S. Census. Comparative populations for the Class A and C3 facilities were calculated utilizing the V-Soft Countpop and Comparpop computer programs.

(2)	Station	Channel	Distance/Az to Brownsville Km/Deg T	Longley-Rice field
	WBLG	296C2	39.06/359.14	13.9 d <b>B</b> u
	WDNS	227C3	27.86/357,83	35.3 dBu
	WHHT	279C3	35.06/318.41	13.1 dBu

Two AM stations were likewise excluded based on their distance from Brownsville -WSM - 650 kHz, Nashville, TN at 97.21 miles, and WHAS - 840 kHz, Louisville at 98.59 miles
from the Brownsville reference point. The Commission has recognized in previous allocation
matters that stations at such distances can not be expected to serve the communities, and,
consequently, should not be considered in evaluating existing service to a community.

FROM : CHAPLES M. ANDERSON PHONE NO. : 502 781 2067 Dec. 30 1996 02:45PM P06

# **EXHIBIT E**

**PROPAGATION STUDIES** 

FROM : CHARLES M. ANDERSON PHONE NO. : 582 791 2867 - lec. 30 1996 02:45PM - P07

Dataworld, Inc.

TEL:1-301-656-5341

Dec 30 96 14:02 No.008 P.02

DR. CHARLES ANDERSON BOWLING GREEN, KY Page 0

December 30, 1996

Longley-Rice Propagation Model

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Job Title:

WBLG (FM)

Surface Refractivity:

Ground Dielectric Constant:

Ground Conductivity:

Polarity:

Climate Descriptor:

301.0 N-Units

15.0

 $5.0 \, \text{ms/m}$ 

Horizontal

Continental Temperate

Transmitter:

Frequency:

Effective Radiated Power:

Height Above M.S.L.

Receiver azimuth:

Receiver distance:

Receiver :

Receiver H.A.G:

N 36-50-35 W 86-15-30

107.10 MHz

50.00 Kw

338.00 m

359.14°

50.00 Km

N 37-17-34 W 86-16-00

9.14 m

Dataworld, Inc. TEL:1-301-656-5341 Dec 30 96 14:03 No.008 P.04

DR. CHARLES ANDERSON BOWLING GREEN, KY

Fage 2 December 30, 1996

# Longley-Rice Propagation Model

Job Title: WBLG(FM)

Dataworld, Inc.

TEL:1-301-656-5341

Dec 30 96 14:16 No.011 P.02

DR. CHARLES ANDERSON BOWLING GREEN, KY

Page 0 December 30, 1996

Longley-Rice Propagation Model

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Job Title:

WDNS (FM)

Surface Refractivity:

Ground Dielectric Constant:

Ground Conductivity:

Polarity:

Climate Descriptor:

301.0 N-Units

15.0

5.0 mS/m

Horizontal

Continental Temperate

Transmitter:

Frequency:

Effective Radiated Power:

Height Above M.S.L.

Receiver azimuth:

Receiver distance:

Receiver :

Receiver II.A.G:

N 36-56-39 W 86-15-13

93.30 MH2

12.00 Kw

319.00 m

357.83°

50.00 Km

N 37-23-36 W 86-16-28

9.14 m

Dec 30 96 14:17 No.011 P.04

## DR. CHARLES ANDERSON BOWLING GREEN, KY

Page 2 December 30, 1996

Longley-Rice Propagation Model

Job Title: WDNS(FM)

48.00 152.0 L.o.S. 105.7

Dist. Elev. Path (dB) (dB) (dB) (dB) (dBu)  24.50 213.0 L.o.S. 100.0 51.2 151.2 71.6 36.2 25.00 213.0 L.o.S. 100.3 51.9 152.2 71.6 35.0 26.00 176.1 L.o.S. 100.6 48.9 149.6 71.6 35.7 26.50 150.5 L.o.S. 100.6 48.9 149.6 71.6 35.6 27.50 169.0 L.o.S. 100.8 51.1 151.8 71.6 35.6 27.50 169.0 L.o.S. 100.1 52.9 153.8 71.6 33.6 28.00 146.7 L.o.S. 100.1 551.0 152.1 71.6 35.8 28.00 146.7 L.o.S. 101.2 53.9 155.1 71.6 32.3 **Brownsville 28.50 162.7 L.o.S. 101.4 56.9 158.3 71.6 29.00 184.5 L.o.S. 101.4 56.9 158.3 71.6 20.1 129.50 211.1 L.o.S. 101.7 54.9 156.6 71.6 30.8 30.50 152.0 I.o.S. 101.8 55.4 157.2 71.6 30.2 31.50 163.6 L.o.S. 102.0 57.6 159.5 71.6 20.3 33.00 218.2 L.o.S. 102.3 64.8 167.1 71.6 20.3 33.00 218.2 L.o.S. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.S. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 20.3 33.00 218.2 L.o.S. 102.5 66.2 168.7 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 18.1 34.00 219.2 L.o.S. 102.5 66.2 168.7 71.6 18.1 34.00 219.2 L.o.S. 102.9 69.2 172.0 71.6 18.1 34.00 219.2 L.o.S. 102.9 69.2 172.0 71.6 18.1 38.3 36.00 183.8 L.o.S. 102.9 69.2 172.0 71.6 15.8 36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.00 183.8 L.o.S. 103.3 72.7 176.0 71.6 11.4
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26.00 176.1 L.o.s. 100.5 51.2 151.7 71.6 35.7 26.50 150.5 L.o.s. 100.6 48.9 149.6 71.6 37.8 27.00 160.8 L.o.s. 100.8 51.1 151.8 71.6 35.6 27.50 169.0 I.o.s. 100.9 52.9 153.8 71.6 33.6 28.00 146.7 L.o.s. 101.1 51.0 152.1 71.6 35.3 * Brownsville 28.50 162.7 L.o.s. 101.2 53.9 155.1 71.6 32.3 (+/- 1 km) 29.00 184.5 L.o.s. 101.4 56.9 158.3 71.6 29.1 29.50 211.1 L.o.s. 101.5 59.3 160.8 71.6 29.1 29.50 211.1 L.o.s. 101.7 54.9 156.6 71.6 30.8 30.50 152.0 I.o.s. 101.8 55.4 157.2 71.6 30.2 31.00 163.6 L.o.s. 102.0 57.6 159.5 71.6 27.9 31.50 183.0 L.o.s. 102.1 60.9 163.0 71.6 24.4 32.00 187.2 I.o.s. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.s. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.s. 102.5 66.2 168.7 71.6 18.7 33.50 213.2 L.o.s. 102.7 68.0 170.8 71.6 16.6 34.50 222.6 L.o.s. 102.7 68.0 170.8 71.6 16.6 34.50 222.6 L.o.s. 102.9 69.2 172.0 71.6 15.4 35.00 183.8 L.o.s. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.s. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.s. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.s. 103.2 68.4 171.6 71.6 15.8
27.50 169.0 L.o.S. 100.9 52.9 153.8 71.6 33.6 28.00 146.7 L.o.S. 101.1 51.0 152.1 71.6 35.3 * Brownsville 28.50 162.7 L.o.S. 101.2 53.9 155.1 71.6 32.3 (+/- 1 km) 29.00 184.5 L.o.S. 101.4 56.9 158.3 71.6 29.1 29.50 211.1 L.o.S. 101.5 59.3 160.8 71.6 26.6 30.00 154.2 L.o.S. 101.7 54.9 156.6 71.6 30.8 30.50 152.0 L.o.S. 101.8 55.4 157.2 71.6 30.2 31.00 163.6 L.o.S. 102.0 57.6 159.5 71.6 27.9 31.50 183.0 L.o.S. 102.1 60.9 163.0 71.6 24.4 32.00 187.2 L.o.S. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.S. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 18.7 33.50 213.2 L.o.S. 102.6 66.7 169.3 71.6 18.7 33.50 213.2 L.o.S. 102.7 68.0 170.8 71.6 18.1 34.00 219.2 L.o.S. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.S. 103.0 70.1 173.0 71.6 15.4 35.50 212.8 L.o.S. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.2 68.4 171.6 71.6 15.8
28.50 162.7 L.o.s. 101.2 53.9 155.1 71.6 32.3 (+/- 1 km) 29.00 184.5 L.o.s. 101.4 56.9 158.3 71.6 29.1 29.50 211.1 L.o.s. 101.5 59.3 160.8 71.6 26.6 30.00 154.2 L.o.s. 101.7 54.9 156.6 71.6 30.8 30.50 152.0 I.o.s. 101.8 55.4 157.2 71.6 30.2 31.00 163.6 L.o.s. 102.0 57.6 159.5 71.6 27.9 31.50 183.0 L.o.s. 102.1 60.9 163.0 71.6 24.4 32.00 187.2 I.o.s. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.s. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.s. 102.5 66.2 168.7 71.6 18.7 33.50 213.2 L.o.s. 102.6 66.7 169.3 71.6 18.1 34.00 219.2 L.o.s. 102.7 68.0 170.8 71.6 16.6 34.50 222.6 L.o.s. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.s. 103.0 70.1 173.0 71.6 15.4 35.50 212.8 L.o.s. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.s. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.s. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.s. 103.3 72.7 176.0 71.6 11.4
29.50 211.1 L.o.s. 101.5 59.3 160.8 71.6 26.6 30.00 154.2 L.o.s. 101.7 54.9 156.6 71.6 30.8 30.50 152.0 L.o.s. 101.8 55.4 157.2 71.6 30.2 31.00 163.6 L.o.s. 102.0 57.6 159.5 71.6 27.9 31.50 183.0 L.o.s. 102.1 60.9 163.0 71.6 24.4 32.00 187.2 L.o.s. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.s. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.s. 102.5 66.2 168.7 71.6 18.7 33.50 213.2 L.o.s. 102.6 66.7 169.3 71.6 18.7 34.00 219.2 L.o.s. 102.7 68.0 170.8 71.6 18.1 34.00 219.2 L.o.s. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.s. 103.0 70.1 173.0 71.6 15.4 35.50 212.8 L.o.s. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.s. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.s. 103.3 72.7 176.0 71.6 11.4
31.00 163.6 L.o.S. 102.0 57.6 159.5 71.6 27.9 31.50 183.0 L.o.S. 102.1 60.9 163.0 71.6 24.4 32.00 187.2 J.o.S. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.S. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 18.7 33.50 213.2 L.o.S. 102.6 66.7 169.3 71.6 18.1 34.00 219.2 L.o.S. 102.7 68.0 170.8 71.6 16.6 34.50 222.6 L.o.S. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.S. 103.0 70.1 173.0 71.6 14.4 35.50 212.8 L.o.S. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.3 72.7 176.0 71.6 11.4
32.00 187.2 L.o.S. 102.2 62.0 164.2 71.6 23.2 32.50 213.5 L.o.S. 102.3 64.8 167.1 71.6 20.3 33.00 218.8 L.o.S. 102.5 66.2 168.7 71.6 18.7 33.50 213.2 L.o.S. 102.6 66.7 169.3 71.6 18.1 34.00 219.2 L.o.S. 102.7 68.0 170.8 71.6 16.6 34.50 222.6 L.o.S. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.S. 103.0 70.1 173.0 71.6 14.4 35.50 212.8 L.o.S. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.3 72.7 176.0 71.6 11.4
33.50 213.2 L.o.S. 102.6 66.7 169.3 71.6 18.1 34.00 219.2 L.o.S. 102.7 68.0 170.8 71.6 16.6 34.50 222.6 L.o.S. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.S. 103.0 70.1 173.0 71.6 14.4 35.50 212.8 L.o.S. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.3 72.7 176.0 71.6 11.4
34.50 222.6 L.o.S. 102.9 69.2 172.0 71.6 15.4 35.00 214.0 L.o.S. 103.0 70.1 173.0 71.6 14.4 35.50 212.8 L.o.S. 103.1 70.5 173.6 71.6 13.8 36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.3 72.7 176.0 71.6 11.4
36.00 183.8 L.o.S. 103.2 68.4 171.6 71.6 15.8 36.50 213.0 L.o.S. 103.3 72.7 176.0 71.6 11.4
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37.00 213.0 L.o.S. 103.4 73.6 177.1 71.6 10.3 37.50 213.0 L.o.S. 103.6 74.5 178.0 71.6 9.4
38.00 213.0 L.o.S. 103.7 76.1 179.8 71.6 7.6 38.50 209.5 L.o.S. 103.8 76.6 180.4 71.6 7.1
39.00 183.0 L.o.S. 103.9 74.5 178.4 71.6 9.0 39.50 183.0 L.o.S. 104.0 75.7 179.7 71.6 7.7 40.00 183.7 L.o.S. 104.1 76.6 180.7 71.6 6.7
40.50       208.2 L.a.s.       104.2       81.1       185.3       71.6       2.1         41.00       213.0 L.a.s.       104.3       82.5       186.8       71.6       .6
41.50 184.2 L.o.S. 104.4 79.9 184.3 71.6 3.1 42.00 183.0 L.o.S. 104.5 80.6 185.1 71.6 2.3 42.50 183.5 L.o.S. 104.6 81.8 186.5 71.6 .9
43.00 192.3 L.o.S. 104.7 84.6 189.4 71.6 -2.0 43.50 182.0 L.o.S. 104.8 83.7 188.5 71.6 -1.1
44.50 193.1 L.o.S. 105.0 87.7 192.7 71.6 -5.3 45.00 200.6 L.o.S. 105.1 88.8 193.9 71.6 -6.5
45.50 188.2 L.o.S. 105.2 88.8 194.0 71.6 -6.6 46.00 212.7 L.o.S. 105.3 92.5 197.8 71.6 -10.4 46.50 213.0 L.o.S. 105.4 94.5 199.9 71.6 -12.5
47.00 205.8 L.o.S. 105.5 94.6 200.1 71.6 -12.7 47.50 181.9 L.o.S. 105.6 91.9 197.4 71.6 -10.0

87.0 192.6 71.6 -5.2

PHONE NO. : 502 781 2067 Dec. 30 1996 02:49PM P11

Dataworld, Inc.

TEL:1-301-656-5341

Dec 30 96

14:19 No.011 P.06

DR. CHARLES ANDERSON BOWLING GREEN, KY

Page 0 December 30, 1996

## Longley-Rice Propagation Model

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Job Title:

WHHT (FM)

Surface Refractivity:

Ground Dielectric Constant:

Ground Conductivity:

Polarity:

Climate Descriptor:

301.0 N-Units

15.0

5.0 ms/m

Horizontal

Continental Temperate

Transmitter:

Frequency:

Effective Radiated Power:

Height Above M.S.L. Receiver azimuth:

Receiver distance:

Receiver :

Receiver H.A.G:

N 36-57-34 W 86-00-08

103.70 MHz

13.50 Kw

346,00 m

318.41°

50.00 Km

N 37-17-42 W 86-22-39

9.14 m

Dataworld, Inc. TEL:1-301-656-5341 Dec 30 96 14:20 No.011 P.08

DR. CHARLES ANDERSON BOWLING GREEN, KY

Page 2 December 30, 1996

Longley-Rice Propagation Model

Job Title: WHHT (FM)

(km)	Elev.	Path Type	Free Space Loss (dB)	Calc. Ref. Attn. (dB)		Power Density (dBm)	•	
24.50 25.00 25.50 26.00	196.0 195.0	L.o.S. L.o.S. L.o.S.	101.J 101.1	52.2 53.0 52.9 55.1		73.1	35.8 34.8 34.9 32.3	
26.50 27.00 27.50 28.00	192.6 193.0 183.0	L.o.S. L.o.S. L.o.S.	101.6 101.7 101.9	56.1 57.5 <b>5</b> 7.4	157.7 159.2 159.2	73.1 73.1 73.1	31.1 29.6	
28.50 29.00 29.50 30.00	180,1 162,5 164,7	L.o.S. L.o.S. L.o.S.	102.0 102.2 102.3	58.8 57.6 59.3 59.7	160.8 159.7 161.6 162.2	73.1	29.1 27.2 26.6	
30.50 31,00 31.50 32.00	164.8 182.5 190.8	L.o.S. L.o.S. L.o.S.	102.7 102.9 103.1	60.4 62.2 65.4 69.1	163.1 165.0 168.3 172.2	73.1 73.1 73.1	25.7 23.9 20.6 16.6	
32.50 33.00 33.50 34.00 34.50	184.5 184.8 154.6	L.o.S. L.o.S. L.o.S. L.o.S.	103.4	70.1 70.0 70.1 69.0 72.6	173.2 173.4 173.5 172.6 176.2	73.1 73.1 73.1	15.4 16.2	
35.00 35.50 36.00 36.50	164.4 149.7 167.5	L.o.S. L.o.S. L.o.S.	103.9 104.0 104.0		175.7 175.0 178.2 181.3	73.1 73.1 73.1		Brownsville (+/- 1 km)
37.00 37.50 38.00 38.50	209.2 213.0 213.0 210.7	L.o.S. L.o.S. L.o.S.	104.2 104.5 104.6 104.7	77.7 79.0 78.7 78.8	183.5 183.3 183.5	73.1 73.1 73.1	5.4 5.6 5.3	
39.00 39.50 40.00 40.50	195.8 183.4 183.0	L.O.S. L.O.S. L.O.S.	104.8 104.9 105.0 105.1	79.8 79.5 79.1 79.8	184.6 184.4 184.1 184.9	73.1 73.1 73.1	4.2 4.4 4.7 3.9	
41.00 41.50 42.00 42.50 43.00	152.0 153.1 160.7	L.o.S. L.o.S. L.o.S. L.o.S.	105.2 105.2 105.3 105.5 105.6	80.2 76.9 77.1 81.3 82.9	185.4 182.1 182.4 186.8 188.5	73.1 73.1 73.1	3.4 6.7 6.4 2.0	
43.50 44.00 44.50 45.00	153.8 156.3 155.1	L.O.S. L.O.S. L.O.S.	105.6 105.8 105.9 106.0	80.6 83.5 84.8 85.4	186.2 189.3 190.7	73.1 73.1 73.1	2.6 5 -1.9 -2.6	
45.50 46.00 46.50 47.00	152.0 148.5 145.7	L.o.S. L.o.S. J.o.S. L.o.S.	106.0 106.2 106.3 106.4	85.4 86.0 86.6 89.7	191.4 192.3 192.9	73.1 73.1 73.1	-2.6 -3.4 -4.0 -7.2	

PHONE NO. : 502 781 2067

## **CERTIFICATION**

Charles M. Anderson hereby certifies that;

His qualifications in broadcast allocation matters are a matter of record before the Federal Communications Commission having been presented and accepted on many occasions in the past;

That he holds a lifetime General Radiotelephone license (#PG-6-7352), a bachelors degree in the physical sciences from Western Kentucky University, and advanced degrees from the University of North Carolina and Indiana University;

That the accompanying technical report and exhibits were developed by him personally or under his immediate supervision and that all the information presented therein is true and correct to the best of his knowledge and belief.

/s/ Charles M. Anderson

December 30, 1996